25X1

SECRET [redacted]

1968 MAY 31 22 02Z

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FM NPIC
TO DIA
BT

OUT 65259

S E C R E T [redacted] CITE NPIC 3910 25X1
ATTN: [redacted] DIAXX-2 25X1
SUBJ: EVALUATION OF GIANT SCALE MISSION S013.

1. QUALITY SUMMARY: MISSION S013, FLOWN ON 8 MAY 1968, PROVIDES MORE CULTURAL IMAGERY THAN ANY PREVIOUS GIANT SCALE MISSION. THE MISSION PROVIDES SOME IMAGERY EQUAL TO THE BEST FROM PREVIOUS GIANT SCALE MISSIONS. CLOUDS AND HEAVY HAZE ARE STILL A MAJOR DEGRADING FACTOR; HOWEVER, ISOLATED CLEAR WEATHER AREAS ARE PHOTOGRAPHED WHICH ARE OF GOOD QUALITY. THE INTERPRETATION SUITABILITY IN THESE CLEAR AREAS IS CONSIDERED GOOD. GROUND RESOLUTION FIGURES ARE EMPIRICAL ESTIMATES BASED ON EVALUATIONS OF SIMILAR SENSORS AND IMPLY A BAR AND A SPACE. THUS, A FIGURE OF [redacted] 25X1 [redacted] OBJECT COULD BE DETECTED. AS USUAL, THE BEST 25X1 GROUND RESOLUTIONS ARE LOCATED NEAR NADIR IN CLEAR AREAS AND THE ORGINAL

PAGE 2 RUEADJU 117 S E C R E T [redacted] 25X1
NEGATIVES WERE USED TO DETERMINE THE FOLLOWING RESOLUTIONS:

A. RIGHT OPERATION OBJECTIVE CAMERA [redacted] 25X1
B. LEFT OPERATIONAL OBJECTIVE CAMERA
C. RIGHT TECHNICAL OBJECTIVE CAMERA
D. LEFT TECHNICAL OBJECTIVE CAMERA

2. CLOUDS OBSCURE OR DEGRADE 75 PERCENT OF THE IMAGERY.

3. THE MATERIAL WAS PROCESSED AT [redacted]. THE MISSION EMPLOYED THE USUAL SENSORS. THE ONLY MATERIALS EVALUATED ARE THE ORGINAL NEGATIVES FROM THE OPERATIONAL AND OBJECTIVE CAMERAS. THE TERRAIN OBJECTIVE CAMERA MATERIAL WAS USED TO DETERMINE THE AREAS OF 80 PERCENT CLOUD FREE PHOTOGRAPHY. 25X1

4. ANALYSIS OF THE TECHNICAL OBJECTIVE MATERIAL.

A. COMMENTS APPLICABLE TO BOTH CAMERAS:

(1) APPROXIMATELY 85 PERCENT OF THE PHOTOGRAPHY WAS ACQUIRED ABOVE 30 DEGREES OBLIQUITY.

(2) THERE ARE MINUS DENSITY STREAKS ASSOCIATED WITH THE PLATEN CONFIGURATION THROUGHT THE MISSION. [redacted] 25X1

(3) THE RESULTS OF STATIC CAN BE DETECTED ALONG BOTH EDGES OF THE NEGATIVES.

(4) BANDING, APPARENTLY INDUCED BY VIBRATION, IS PRESENT THROUGHOUT THE MISSION.

(5) THE DENSITY AND CONTRAST IS SATISFACTORY.

ADVANCE CY SANITIZED WITH TEXT

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B. LEFT CAMERA (AL), S/N 64-07.

(1) RANDOM MINUS DENSITY STREAKS PARALLEL TO THE MAJOR AXIS ARE PRESENT.

(2) A PLUS DENSITY STREAK, PARALLEL TO THE MAJOR AXIS, 2.0 INCHES FROM THE TITLED EDGE CAN BE DETECTED THROUGHOUT THE MISSION; A SIMILAR STREAK IS PRESENT 2.0 INCHES FROM THE NON-TITLED EDGE IN FRAME 538 AND FOR THE REMAINDER OF THE MISSION. ANOTHER PLUS DENSITY STREAK, PARALLEL TO THE MAJOR AXIS AND 3.1 INCHES FROM THE TITLED EDGE, IS PRESENT THROUGHOUT THE MISSION.

(A) A 5.0 INCH LONG PLUS DENSITY STREAK IS

GROUP 1 Excluded from automatic downgrading and declassification

SECRET [redacted]

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PRESENT IN FRAME 544.
(3) PRESENT IN FRAME 546 AND INTERMITTENTLY THROUGHOUT THE REMAINDER OF THE MISSION IS A LIGHT PLUS DENSITY FOG AREA, PROBABLY INDUCED DURING PROCESSING.
(4) EMULSION LIFTS ARE PRESENT IN FRAME 2, 1045, AND 1051.
(5) EMULSION SCRATCHES ARE PRESENT IN FRAMES 604 AND 609.
(6) AN ULTRASONIC SPLICE IS LOCATED IN FRAME 1105.

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(7) CAMERA OFF/ONS: BETWEEN FRAMES 199/200, 230/231, 723/724, 847/848 AND 1091/1092.
(8) LAST TITLED FRAME: 1295.
C. RIGHT CAMERA (AR), S/N 64-20
(1) RANDOM MINUS DENSITY STREAKS PARALLEL TO THE MAJOR AXIS ARE PRESENT.
(2) TWO PLUS DENSITY STREAKS, PARALLEL TO MAJOR AXIS, ARE LOCATED 2,0 INCHES FROM TITLED EDGE AND THE OTHER 2.0 INCHES FROM OPPOSITE EDGE, ARE PRESENT AFTER FRAME 290. ANOTHER PLUS DENSITY STREAK, PARALLEL TO MAJOR AXIS, 1.3 INCHES FROM TITLED EDGE IS PRESENT FROM FRAME 291 TO END OF MISSION.
(3) DATA CHAMBERS OF FRAMES 72, 73 AND 300 ARE PARTIALLY CONTAINED IN THE PRECEDING FRAMES.
(4) A 0.05 INCH WIDE MINUS DENSITY AREA IS LOCATED ALONG THE NON-TITLED EDGE OF THE FORMAT THROUGHOUT THE MISSION.
(5) AN ULTRASONIC SPLICE IS LOCATED IN FRAME 567. A MYLAR SPLICE IS PRESENT BETWEEN FRAMES 1060/1061.
(6) CAMERA OFF/ONS: BETWEEN FRAMES 245/246, 290/291,

PAGE 5 RUEADJU 117 S E C R E T [redacted] 25X1
858/859, 1071/1072, AND 1097/1098.
(7) LAST TITLED FRAME: 1241.
5. ANALYSIS OF THE OPERATIONAL OBJECTIVE CAMERA MATERIAL:
A. COMMENTS APPLICABLE TO BOTH CAMERAS.
(1) THE DENSITY AND CONTRAST OF THE NEGATIVES APPEAR SATISFACTORY.
(2) THE FIRST 0.75 INCH OF SCAN FOR ALL FRAMES IS DEGRADED AND APPEARS OUT-OF -FOCUS. THE FIRST 0.20 INCH OF THIS IS THE MOST SEVERE.
(3) MINOR, HAIR-LIKE EMULSION SCRATCHES OCCUR INTERMITTENTLY AND VARY IN LENGTH AND LOCATION THROUGHOUT THE MISSION MATERIAL.
(4) SOME HANDLING MARKS ARE NOTED ON SEVERAL FRAMES ADJOINING EACH SPLICE. MYLAR TAPE SPLICES ARE MADE BETWEEN FRAMES 522/523, 1044/1045, AND 1566/1567.
(5) THE LAST FRAME OF EACH CAMERA OPERATION DISPLAYS FOGGED PATTERNS NORMALLY ASSOCIATED WITH A CAMERA OFF.
(6) TITLED FRAME NUMBERS CORRESPOND DIRECTLY TO THE EVENTS COUNTER.
(7) THE DATA CHAMBER IS SLIGHTLY SKEWED THOUGHOUT.

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THIS OBLITERATED THE MINUTE AND SECOND MARKS ALONG THE FAR RIGHT SIDE OF THE CLOCK.

(8) FLARE, FROM HIGHLY REFLECTIVE SURFACES (SUCH AS DENSE CLOUDS AND SURFACE WATER) IS NOTED ON MANY FWD FRAMES. THIS FLARE IS STREAKED ALONG THE MAJOR AXIS (SCAN DIRECTION) BEFORE AND AFTER THE REFLECTION SURFACE (EXAMPLES: RIGHT FRAMES 7, 11, 25 AND LEFT FRAMES 754, 756, 758.

B. LEFT OPERATIONAL OBJECTIVE CAMERA (CL), S/N 4005:

(1) THE TIME TRACK IS NOT IMAGED FOR THE FIRST 6.75 INCHES OF FRAME 0001 AND THE FIRST 1.75 INCHES OF FRAME 1715. THE TIMING DOTS OF ALL OTHER FRAMES BEGIN 0.55 INCH AFTER THE START OF SCAN AND EXTEND 0.75 INCH BEYOND END OF SCAN. THEY ARE IMAGED INSIDE THE FORMAT AREA.

(2) CAMERA OFF/ONS OCCUR BETWEEN FRAMES 671/672 AND 1714/1715. THE FRAMES AT EACH CAMERA OFF/ON ARE SLIGHTLY OVERLAPPED.

(3) THERE ARE A LARGE NUMBER OF RAIL SCRATCHES EVIDENCED ON THIS MISSION. A SIMILAR NUMBER OF RAIL SCRATCHES OCCURRED ON MISSION S012, UTILIZING THE SAME CAMERA.

(4) A MINUS DENSITY STREAK IS PRESENT 1.41 INCHES FROM AND PARALLEL TO THE TITLED EDGE OF THE FILM.

(5) NONE OF THE STRETCH MARKS ARE IMAGED ALONG THE NON-TITLED EDGE BORDER. A POSSIBLE CAUSE OF THIS FAILURE MAY BE A MALFUNCTION IN THE ILLUMINATING SOURCE OR FOREIGN MATTER (EMULSION) IN THE HOLES.

(6) LAST TITLED FRAME: 1949.

C. RIGHT OPERATIONAL OBJECTIVE CAMERA (CR), S/N 4030:

(1) THE TIME TRACK IS NOT IMAGED FOR FRAMES 01 TO 15, THE FIRST 7.1 INCHES OF FRAME 016, FRAMES 676, 677, THE FIRST 8.7 INCHES OF FRAME 678, FRAME 1723 AND THE FIRST 7.95 INCHES OF FRAME 1724. THE TIMING DOTS OF ALL OTHER FRAMES BEGIN 0.65 INCH AFTER THE START OF SCAN AND EXTEND 0.85 INCH BEYOND END OF SCAN.

(2) CAMERA OFF/ONS OCCUR BETWEEN 675/676 AND 1722/

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1723. FRAMES 1722/1723 ARE OVERLAPPED 0.45 INCH.

(3) A MINUS DENSITY STREAK IS PRESENT 0.92 INCH FROM AND PARALLEL TO THE NON-TITLED EDGE OF THE FILM.

(4) AN ULTRASONIC SPLICE IS LOCATED IN FRAME 270.

(5) THE TITLED BORDER OF FRAMES 185-196, 535-540 AND 619-620 DISPLAYS A MINOR CREASE WITH SMALL CRIMPS WITHIN IT.

(6) THE TITLING INFORMATION PLACED ON FRAMES 742-748 IS FLAKED AND DIFFICULT TO READ. THE SECURITY CLASSIFICATION OF FRAMES 747 AND 748 IS COMPLETELY REMOVED.

(7) THE LAST TITLED FRAME OF THE RIGHT OOC IS 1959.

6. MISSION RECORDER SYSTEM (MRS) CORRELATION:

A. TECHNICAL OBJECTIVE CAMERAS: A GOOD CORRELATION WAS ACHIEVED FOR BOTH TECHNICAL OBJECTIVE CAMERAS. THERE IS A BIAS OF PLUS 43 SECONDS IN THE MRS OVER THE TIME IMAGED ON FRAME 1 OF THE RIGHT TOC. THE BIAS DOES NOT VARY SIGNIFICANTLY AND IS PLUS 40 ON THE LAST FRAME.

B. OPERATIONAL OBJECTIVE CAMERAS: A GOOD CORRELATION WAS OBTAINED ON LEFT OOC WITH A BIAS OF PLUS 1 OR 2 SECONDS THROUGH-

OUT THE MISSION. THE CORRELATION OF THE RIGHT OOC IS POOR.

PAGE 3 RUEADJU 118 S E C R E T [redacted] 25X1
AT THE BEGINNING THE MRS HAS PLUS 65 SECOND BIAS AND VARIES
FROM PLUS 20 SECONDS (FRAME 749) TO 190 SECONDS ON THE LAST
FRAME.
GP-1
S E C R E T [redacted] 25X1

END OF MESSAGE